



Technical Memorandum

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Prepared for: New York City Department of Environmental Protection (DEP)
Project Title: Construction of CSO Facilities for Gowanus Canal
DEP Contract: CSO-GC-SFS DES, Funded by Capital Project WP-169
BC Project No.: 149573

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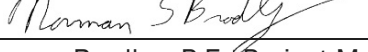
Subject: Gowanus Canal CSO Tank Cost Summary – March 2019

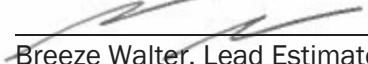
Date: March 13, 2019


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Limitations:

This document was prepared solely for New York City Department of Environmental Protection (DEP) in accordance with professional standards at the time the services were performed and in accordance with the contract between DEP and Hazen and Sawyer dated May 23, 2016. This document is governed by the specific scope of work authorized by DEP; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by DEP and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Gowanus Canal CSO Tank Cost Summary – March 2019

The detailed design of the CSO facilities for the Gowanus Superfund site has been underway since July 2016. Over the course of the project, the design has evolved and been updated to reflect advancing awareness of site conditions, stakeholder needs, and planned remediation and construction activity by other parties. To date, the Owl's Head CSO facility has proceeded through the Basis of Design Report (BODR) phase of facility planning. The design of the Red Hook CSO facility is nearly complete. In conjunction with updating the design for the two facilities, the cost estimate is also updated at each progressive milestone (Facility Planning, BODR, 30%, 60%, and 90%).

The CSO facility designs have been divided into three main packages, including:

- Construction package 1 (CP-1) is a site preparation and demolition contract for Parcel VI and VII at the Red Hook CSO facility site and the DSNY site at Owl's Head CSO facility site. This contract will demolish existing structures on sites, disconnect and/or relocate any in-service utilities, and provide a secure site perimeter for work that will follow.
- Construction package 1 (CP-1A) is a site preparation and demolition contract for Parcel I at the Red Hook CSO facility site. This contract will demolish existing structures on sites, disconnect and/or relocate any in-service utilities, and provide a secure site perimeter for work that will follow.
- Construction package 2 (CP-2) includes the belowground structures and conveyance channels. It includes construction of the support of excavation; the excavation, stabilization, and disposal of soils; construction of the CSO facility conveyance channels and at the RH site, a portion of the CSO relocation along Nevins Street. This package also includes construction of the tank substructure.
- Construction package 3 (CP-3) includes the aboveground structures. It includes construction on the CSO facility itself, site landscaping, and the conveyance tie-ins necessary to integrate the facility with DEP's infrastructure at the RH-034 and OH-007 outfalls. At the RH site, this package also includes the remainder of the CSO relocation along Nevins Street and Butler Street,

Table 1 presents the current estimated cost of the tanks as of March 2019. The costs below for the various RH construction packages reflect different stages of design. The CP-1 cost is reflective of the 100% Design, the CP-2 cost reflects the 90% Design, and the CP-3 cost reflects the 60% Design. The cost estimates for the OH construction packages are based on the BODR. The cost estimate class for each construction package is included in Table 2.

Also attached to this report are the bid tabs and detailed cost breakdowns for each package. The bid tabs provide a bid schedule of prices, summary of the engineer's estimate of the cost, and summary of important information regarding the anticipated schedule for each package and escalation factors applied.

Table 1. Cost Summary for CSO Tanks at RH-034 and OH-007 (as of March 2019)	
Cost Components	Cost
Construction Site Preparation (CP-1 & CP1A)	\$ 41,000,000
Red Hook	\$ 27,000,000
Owls Head	\$ 14,000,000
Subsurface Structures (CP-2)	\$ 588,000,000
Red Hook	\$ 380,000,000
Support of Excavation	\$ 192,000,000
Excavation	\$ 13,000,000
Remediation / Disposal Cost	\$ 94,000,000
Substructure	\$ 74,000,000
Allowances	\$ 7,000,000
Owls Head	\$ 208,000,000
Support of Excavation	\$ 104,000,000
Excavation	\$ 6,000,000
Remediation / Disposal Costs	\$ 53,000,000
Substructure	\$ 40,000,000
Allowances	\$ 5,000,000
Superstructures (CP-3)	\$ 260,000,000
Red Hook	\$ 182,000,000
Superstructure / Building	\$ 23,000,000
Conveyance / Nevins	\$ 57,000,000
Equipment	\$ 71,000,000
Arch/Landscaping	\$ 27,000,000
Allowances	\$ 4,000,000
Owls Head	\$ 78,000,000
Superstructure / Building	\$ 16,000,000
Equipment	\$ 46,000,000
Arch/Landscaping	\$ 8,000,000
Allowances	\$ 8,000,000
Total Facility Construction Cost	\$ 889,000,000
TFCC Range	\$740M - \$1.13M
Engineering/Design	\$ 90,000,000
CM	\$ 91,000,000
Land Acquisition	\$ 190,000,000
Total Design/Acquisition	\$ 371,000,000
Project Total	\$ 1,260,000,000

Table 2. Cost Estimate Class	
Package	Date of Most Recent Update
OH	September 2017 (Class 4)
RH CP-1	October 2018 (Class 1)
RH CP-2	March 2019 (Class 1)
RH CP-3	November 2018 (Class 2)

